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DEPARTMENT OF THE AIR FORCE

SUPPORTING DATA FOR
FISCAL YEAR 1990/91

BIENNIAL BUDGET ESTIMATES

SUBMITTED TO CONGRESS JANUARY 1989



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DESCRIPTIVE SUMMARIES

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

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FY 1990/1991 BIENNIAL EDT&E DESCRIPTIVE SUMMARY

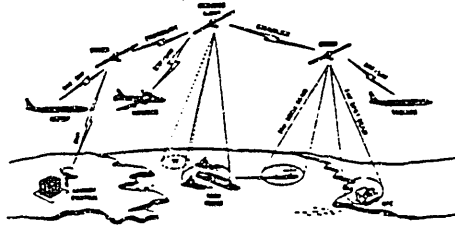
Program Element: #0303601F

Project: #2487

PE Title: Milstar Satellite Communications System
(Air Force Terminals)

Budget Activity: 3 -
Strategic Programs

Project Title: Milstar



POPULAR NAME: MILSTAR

A. (U) SCHEDULE/BUDGET INFORMATION (\$ in Thousands):

SCHEDULE	FY 1988	FY 1989	FY 1990	FY 1991	To Complete
Program Milestones	N/A	N/A	N/A		Terminal MS IIIB FY 92
Engineering Milestones		Complete FCA/PCA	System End-to-End Test	N/A	N/A
T&E Milestones	Interoperability Demos	C-18 Flight Tests	N/A	N/A	System IOT&E, 3rd Qtr, FY 92
Contract Milestones	Ongoing	MS IIIA LRIP Contract Award	Ongoing	Last Year LRIP	MS IIIB Contract Award
BUDGET (\$000)	FY 1988	FY 1989	FY 1990	FY 1991	Program Total (To Complete)
Major Contract	127,056	228,875	125,693	45,015	Continuing
Support Contract	7,300	15,100	11,800	11,200	Continuing
In-House Support	15,400	9,600	7,500	6,400	Continuing
GFE/Other	46,400	49,400	65,200	49,300	Continuing
Total	196,156	302,975	210,193	104,915	Continuing

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PE: #0303601F

PE Title: Milstar Satellite Communication System
(Air Force Terminals)

Project: #2347

Budget Activity: 3 -
Strategic Programs

B. (U) BRIEF DESCRIPTION OF MISSION REQUIREMENT AND SYSTEM CAPABILITIES:

This program develops and acquires Air Force Satellite Communication (AFSATCOM) Ultra High Frequency terminal modifications, transponder test set upgrades, and gap filler AFSATCOM payloads, required for transition to the Milstar satellite system. It also provides resources for development and acquisition of Milstar Extremely High Frequency terminals for the Air Force. The Milstar satellite system will provide a highly survivable, jam-resistant, worldwide, secure communications system to support the President and the military Commanders-in-Chief for command and control of selected United States strategic and tactical forces in all levels of conflict.

C. (U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1988 Accomplishments:

- (U) Began installation of force element and command post dual modem and radio upgrades
- (U) Successfully demonstrated interoperability between Air Force, Navy and Army terminals
- (U) Installed/ground tested C-18 terminal flight testbed against on-orbit Fleet Satellite (FLTSAT) EHF package
- (U) Successfully tested terminal against Design Verification Satellite
- (U) Continued terminal Functional Configuration Audit/Physical Configuration Audit (FCA/PCA) activity
- (U) Continued fabrication and deployment of Engineering Development Model (EDM) terminals for EC-135C aircraft and selected ground sites to support
- (U) Completed Independent Cost Analysis (Briefed OSD 15 Nov 88)
- (U) Began Full Scale Development of Low Volume Force Element (LVFE) terminal

2. (U) FY 1989 Planned Program:

- (U) Continue installation of force element and command post dual modem and radio upgrades
- (U) Complete terminal FCA/PCA
- (U) Continue C-18 flight test program
- (U) Continue fabrication and installation of EDM terminals for EC-135C aircraft and selected ground sites
- (U) Begin facility modifications of Mission Control Complex (MCC) at the Consolidated Space Operations Center at Falcon AFS, Co.
- (U) Begin terminal Low Rate Initial Production (Milestone IIIA)
- (U) Continue interoperability testing with Enhanced Design Verification Model (EDVM) satellite
- (U) Continue LVFE efforts

3. (U) FY 1990 Planned Program:

- (U) Continue installation of force element and command post dual modem and radio upgrades

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PE: #0303601F

PE Title: Milstar Satellite Communication System
(Air Force Terminals)

Project: #2847

Budget Activity: 3 -
Strategic Programs

- (U) Complete C-18 flight test program
- (U) Continue fabrication and installation of EDM terminals for EC-135C aircraft and selected ground sites
- (U) Complete MCC facility modifications of MCC at Consolidated Space Operations, Falcon AFB, Co
- (U) Continue Low Rate Initial Production
- (U) Continue LVFE effort

4. (U) FY 1991 Planned Program:

- (U) Complete installation of force element and command post dual modem and radio upgrades
- (U) Complete fabrication and installation of EDM terminals for EC-135C aircraft and selected ground sites
- (U) Complete Low Rate Initial Production (Full Scale Production begins, Milestone IIIB, FY 92)
- (U) Continue LVFE development

5. (U) Program to Completion:

- (U) Begin Full Scale Production (Milestone IIIB)
- (U) Complete development and begin production of LVFE
- (U) Milstar is a continuing program

D. (U) WORK PERFORMED BY: Milstar terminals are being developed by Raytheon Company, Sudbury, MA and Rockwell International, Dallas, Tx. Federal Research Center support is provided by the MITRE Corporation, Bedford, MA, and Lincoln Laboratory, Bedford, MA.

E. (U) COMPARISON WITH FY 1988/1989 DESCRIPTIVE SUMMARY:

TYPE OF CHANGE	Impact on System Capabilities	Impact on Schedule	Impact on FY 1990 Cost
Tech	None	None	None
Sched	None	None	None
Cost	None	None	-9,038

NARRATIVE DESCRIPTION OF CHANGES

1. (U) TECHNICAL CHANGES: None
2. (U) SCHEDULE CHANGES: None
3. (U) COST CHANGES: Department of Defense reductions

F. (U) PROGRAM DOCUMENTATION:

- (U) Joint Milstar Communications, Control and Operations Concept (JMCCOC), Volume I (May 1985) and Volume II (Mar 1988)

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PE: #0303601F

Project: #2487

PE Title: Milstar Satellite Communication System
(Air Force Terminals)

Budget Activity: 3 -
Strategic Programs

G. (U) RELATED ACTIVITIES:

- (U) PE 0303603F (Milstar Satellite Communications System (Space and Mission Control)
- (U) PE 0604577F (EHF Satellite Communications)
- (U) PE 0303142A (Tactical Communications Ground Environment)
- (U) PE 0303109N (Satellite Communications)
- (U) PE 0303605F (Satellite Communications Terminals)
- (U) PE 0305119F (Space Boosters)
- (U) PE 0303603N (Milstar Satellite Communications System)
- (U) PE 0101113F (B-52 Squadrons)
- (U) PE 0101126F (B-1E)
- (U) PE 0101213F (Minuteman Squadrons)
- (U) PE 0101312F (Post Attack Command and Control System/Worldwide Command Post, EC-135H/J/P)
- (U) PE 0208019F (Tactical Cryptologic Activities, RC-135)
- (U) PE 0302015F (National Emergency Airborne Command Post, E-4B)
- (U) There is no unnecessary duplication of effort within AF or DoD.

H. (U) OTHER APPROPRIATION FUNDS (\$ In Thousands):

	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>	<u>FY 1991</u>	<u>Program Total (To Complete)</u>
Aircraft Procurement (BA 10)					
Funds (PE 0302015F)	N/A	26,900	12,200	9,000	48,100
Initial Spares	N/A	652	0	0	Continuing
Quantity (Terminals)	N/A	2	1	1	4
Funds (PE 0101312F)					
Funds (PE 0101312F)	N/A	12,800	34,600	31,900	Continuing
Initial Spares	N/A	2,200	4,942	512	Continuing
Quantity (Terminals)	N/A	1	4	4	Continuing
Funds (PE 0303601F)*					
Funds (PE 0303601F)*	N/A	0**	53,000	20,900	Continuing
Initial Spares	N/A	0	11,765	2,097	Continuing
Quantity (Term/HHM/TDS)	N/A	0/0/0**	0/649/29	1/125/8	Continuing
Other Procurement* (BA 16)					
Funds	N/A	73,101**	102,352	176,056	Continuing
Initial Spares	N/A	3,570	11,523	13,143	Continuing
Quantity (Term/HHM/TDS)	N/A	4/103/7	9/79/7	21/0/0	Continuing
Military Construction (BA 14)					
Funds	N/A	4,000***	330	3,550	Continuing

I. (U) INTERNATIONAL COOPERATIVE AGREEMENTS: Not Applicable.

*Procures EHF/UHF Terminals as well as Handheld Modules/Time Distribution Subsets (HHM/TDS) for AFSATCOM Upgrade

**Approp Conf zeroed FY89 PB request (\$20.5M APAF) to procure 254 HHM and 11 TDS, and re-instated (\$8.923M) to procure 103 HHM and 7 TDS.

***Funds inadvertently placed in PE 030605F, Air Force Satellite Terminals

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